



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,859	09/30/2003	Oliver Kiehl	2003 P 52361 US	6303
48154	7590	04/03/2007	EXAMINER	
SLATER & MATSIL LLP			TRAN, KHAI	
17950 PRESTON ROAD			ART UNIT	
SUITE 1000			PAPER NUMBER	
DALLAS, TX 75252			2611	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/03/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

54

Office Action Summary	Application No. 10/674,859	Applicant(s) KIEHL, OLIVER	
	Examiner KHAI TRAN	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-20 is/are pending in the application.
4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-8 and 21 is/are rejected.
- 7) ☒ Claim(s) 9-20, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. The response to Election/Restriction filed 3/06/2007 has been entered. The applicant has elected group II (claims 7-20). Group I (claims 1-6) must be cancelled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 7-8, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Stonecypher et al (US 2004/0109509 A1).

Regarding claim 7, Stonecypher et al disclose a circuit comprising: an encoder (102, see Figures 3 and 14) coupled to a data input (D_{in}), the encoder containing circuitry to convert data words from the data input into code words with minimized number of occurrences of a given state (see [0065], [0093] and [0094] showing the 4S5S encoder 200 receives 8-bit data words and provides 10-bit code words. Both the 8-bit to 10-bit encoder 202 and the look-up table logic 204 receive 8-bit data words and provide 10-bit code words. The look-up table logic 204 also provides a multiplexer selection signal to the multiplexer 206. The multiplexer 206 determines which 10-bit code word is provided as the output 10-bit code word from the 4S5S encoder 200

Art Unit: 2611

based upon the state of the multiplexer selection signal); a transmitter (104) coupled to the encoder, the transmitter containing circuitry to inject the code words onto a transmission line (conductors 110).

Regarding claim 8, Stonecypher et al disclose wherein the code word is one bit longer than the data word ([0093]).

Regarding claim 21, Stonecypher et al disclose a transmission system as shown in Figure 3, comprising: an encoder (102) coupled to a data input (D_{in}), the encoder containing circuitry to convert data words from the data input into code words with minimized number of occurrences of a given state (see [0065], [0093] and [0094] showing the 4S5S encoder 200 receives 8-bit data words and provides 10-bit code words. Both the 8-bit to 10-bit encoder 202 and the look-up table logic 204 receive 8-bit data words and provide 10-bit code words. The look-up table logic 204 also provides a multiplexer selection signal to the multiplexer 206. The multiplexer 206 determines which 10-bit code word is provided as the output 10-bit code word from the 4S5S encoder 200 based upon the state of the multiplexer selection signal); a transmitter (104) coupled to the encoder, the transmitter containing circuitry to inject the code words onto a transmission line (conductors 110); a receiver (106) coupled to the transmission line, the receiver (106) containing circuitry to receive code words from the transmission line; and a decoder (108) coupled to the receiver, the decoder containing circuitry to convert code words into data words (see [0056] to [0060]).

Allowable Subject Matter

Art Unit: 2611

4. Claims 9-20, 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: Stonecypher et al fail to disclose the encoder comprising: a weight calculator coupled to the data input, the weight calculator containing circuitry to determine a count of the number of times the given state appears in a data word and to compute a weight bit based on the count; and a plurality of logic blocks coupled to the data input and the weight calculator, wherein each logic block is coupled to a single bit of the data input and the weight bit computed by the weight calculator, the logic block to combine the inputs to produce a bit of the code word.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

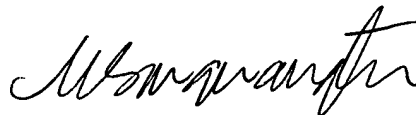
Gauthier et al (U.S. Pat. 6,614,287) disclose a calibration technique for delay locked loop leakage current.

Kahlman (US 2005/0219074) discloses a balanced disparity channel code for DC control.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KHAI TRAN
Primary Examiner
Art Unit 2611

KT
March 27, 2007